

## New Orleans Hurricane Protection System gets new outfall canal pumps

By Susan Spaht  
Task Force Hope

Outfall canal pumps are an integral part of the new Hurricane and Storm Damage Reduction System that the U.S. Army Corps of Engineers is building in New Orleans. These temporary pumps are being installed at the 17<sup>th</sup> Street, Orleans Avenue, and London Avenue outfall canals.

The pumps are called “temporary” because they are part of the temporary outfall canal closure structures that were installed immediately after Hurricane Katrina as an interim storm surge protection measure. Permanent pumps and closure structures are being designed and built, and are scheduled to be operational for the 2012 hurricane season.

**Important.** The temporary pumps have one important mission. When the gated structures that are designed to prevent high levels of Lake Pontchartrain storm surge from entering the outfall canals are closed during a storm, the pumps will be activated to transport water from the outfall canals, around the gated structures, and into the lake.

The three outfall canals are critically important to New Orleans’ ability to reduce potential risk to its citizens from rainfall inundation during major storm. Permanent pumping stations are used to pump accumulating rainfall from low areas into the outfall canals, where it then flows into Lake Pontchartrain. If the recently installed gated structures are closed, that water cannot flow by gravity into the lake as designed, and must be pumped by the temporary pumps to prevent water levels from rising too high within the canal.

The pumps and gates will protect the weakened floodwalls along the outfall canals, and enable inspection of those structures during storm events.

**Accuracy.** Lately, there has been inaccurate and misleading reporting by local and national media about the history, status, and capabilities of the temporary pumps. In its continuing effort to remain open and transparent, the Corps offers accurate information regarding these vital elements of the Hurricane and Storm Damage Reduction System.

Hurricane Katrina caused several breaches in the outfall canal floodwalls — one at 17<sup>th</sup> Street, and two at London Avenue.

“The first thing the Corps had to do was repair the breaches,” said Brett Herr, Branch Chief for Regional Projects Branch in the Corps’ Protection and Restoration Office. “At the same time, we were evaluating the rest of the outfall canal floodwalls to determine what kind of storm surge they could withstand.”

There are 13 miles of floodwalls at the three canals.

According to Herr, the Corps, along with local and state officials, decided that the only feasible solution to restoring hurricane protection for the 2006 hurricane season would be to block the canals with temporary gated structures and pumps.

“It was within (the Corps’) emergency authority to repair the damage and restore protection to that area,” Herr explained. Congress provided funding with the



Two pumps at the 17th St. Outfall Canal perform at full capacity during a test on March 24. There are a total of 18 pumps at 17th St. (Photo courtesy of Task Force Hope)

3<sup>rd</sup> Emergency Supplemental Appropriations Act, and the Corps began the process to design and build the temporary gates and pumps.

In January 2006, the Corps placed an order for 34 60-inch temporary pumps — 12 for 17<sup>th</sup> Street Canal, 12 for London Avenue Canal, and 10 for Orleans Avenue Canal. The new pumps began arriving in New Orleans in late spring, before the 2006 hurricane season.

As soon as the pumps arrived, they were immediately installed by construction crews working 24 hours a day, seven days a week. In addition, the contract was modified in early summer to add six more pumps to the 17<sup>th</sup> Street Canal, bringing the total for all three canals to 40 pumps, with 18 of those for 17<sup>th</sup> Street.

“We installed the new temporary pumps as fast as we received them,” said Jim St. Germain, a senior project manager in the Hurricane Protection Office. “We had crews working at the outfall canals around the clock; they were even doing some of the work at night, under lights. We were determined to make our pre-hurricane season goal, and we did.”

That is not the usual means for manufacturing and installing massive equipment like these pumps. Under normal circumstances, whether for government or private industry, performance tests would be done on the equipment at the factory by the manufacturer before delivery, without observation by the

government. Any operational problems would be repaired or adjusted there, and the equipment would be tested and re-tested until it meets performance expectations. When the performance is satisfactory, then the equipment would be installed in its intended location.

That’s what happens under *normal* circumstances.

**Not business as usual.** But following Katrina, the Corps did not have the luxury of working under normal circumstances. To quickly reduce the public risk, Corps personnel were placed at the factory to document manufacturer’s tests, resulting in a series of reports regarding the pumps’ capabilities.

“When we installed the new pumps, we knew they weren’t operating to full effectiveness,” said Col. Jeffrey Bedey, Hurricane Protection Office commander. “We had numerous engineering reports which told us that. But if we had done this in the traditional manner, it would have taken four to five years to get the pumps in place. Instead, we put the pumps in at the sites in a matter of months. To reduce the risk to the community for the next hurricane season, we wanted the pumps on the ground. We decided we would work out the final testing on the pumps in place.”

Continued on page eight



## Insights

# Warrior Ethos guides Soldiers' ethical choices

Col. Sherrill Munn  
Chaplain, U.S. Army Corps of Engineers

I am beginning a four-part series about the Warrior Ethos.

What is the Warrior Ethos? First, it helps to note that the words *ethics* and *ethos* are related.

**Ethics & ethos.** *Ethics* is not necessarily about what you do; it's more about *why* you do it. For example, it is against all legal and moral codes to shoot your neighbor. But suppose your neighbor is Mohammed Atta, and you discover that he is planning to crash an airliner into the World Trade Center. If you had to shoot Atta as the only way to stop him, you would be called a hero. (You might still go to jail, but at least you would go as a hero!)

That is an *ethical* decision guided by your knowledge of right and wrong, which comes in part from an *ethos*, "The guiding beliefs, standards, or ideals that characterize a group, community, or ideology," says *Webster's Third New World Dictionary*.

The Warrior Ethos is the moral code of the Army, the essential core of the Soldier's being. It binds Soldiers together into the Army team, and guides them in the difficult decisions and missions they face.

This code is not new. It has been at the heart of the American Soldier since 1775. It has to do with the Soldier's focus, attitude, and commitment that result in specific action. The Warrior Ethos is captured in these four statements:

***I will always place the mission first.***

***I will never accept defeat.***

***I will never quit.***

***I will never leave a fallen comrade.***

While these principles clearly apply to Soldiers in combat, I believe they apply equally to all in government service. They not only apply to our professional lives, but to our private lives as well.

In this series of four articles, I will explore the significance of living the Warrior Ethos.

**Mission first.** The first principle is **I will always place the mission first.**

This commitment sets priorities, because many other important things compete for top honors. Faith and family commitments are among those. As laudable as they may be, there are problems with placing those above the mission.

Faith gives us a foundation of beliefs and values that underpin everything else. Faith and the sense of divine presence and acceptance can give us the courage and commitment to follow through with the mission no matter how difficult.

However, unless you are clergy, your everyday *mission* is not religious in nature.

Family relationships are crucial to our well-being. In our families we find the love and acceptance that we need to be healthy people. In the military, great stresses are often put on families by frequent moves, deployments, combat, wounds, and even death. While we love and are committed to our families, the practical reality is that duty often calls us away and we cannot fulfill our normal family role.

In the military, families must also accept the War-

rior Ethos. They are an essential part of it. They must be prepared to place the mission first and take increased responsibility, endure separation, anxiety, and hardship along with their military loved ones.

The Army recognizes this and has programs to produce "Army Strong" families. Soldiers have a difficult time focusing on the mission when there are problems in the family or they do not have the support of the family. In the Army, both the Soldier and the family must live the Warrior Ethos.

Thus, mission must be first to avoid distractions that would cause us to fail. Placing mission first involves fulfilling the trust of our citizens whose freedom and way of life depends on the Soldier, our fellow Soldiers who depend on us to bear our part of the load, and our superiors who depend on our loyalty, ability, and willingness to do what must be done.

**Government service.** The moral commitment to mission first is essential not only to military service but to all forms of government service, and particularly to the U.S. Army Corps of Engineers. The Corps not only supports the warfighter, but also national strategic objectives like stability operations and nation building. We have particular obligations to the safety and well-being of our people, the nation's commerce and economy, and in response to natural disasters and terrorism.

The critical Corps' responsibilities mean that we cannot fail in either our military programs or civil works missions. They are both critical to our nation and its citizens. The missions of the Corps encompass the prosperity, strength, and survival of our nation and our people.

Adopting the commitment to "Mission First" is an essential step toward being better government servants, always ready to serve and do what is necessary to accomplish the mission. In so doing we will make the Corps of Engineers a strong, effective team that our citizens can always depend on.

Placing mission first may require great personal sacrifice. The selfless service required to live the Warrior Ethos with mission as your first priority is challenging. But no other way of life is more rewarding or meaningful.

A historical illustration shows how critical that putting mission first can be. It also shows that you must be ready because you never know when the success of the mission rests on you.

**Gettysburg.** On July 2, 1863 during the Battle of Gettysburg, Maj. Gen. Winfield Hancock was riding north along the Union lines on Cemetery Ridge when he noticed a large number of troops moving in the smoke. Supposing them to be Union, Hancock rode toward them only to discover that they were Confederates. He had ridden toward the lead regiments of Brig. Gen. Cadmus Wilcox's Alabama Brigade.

Realizing that no Union troops were occupying this area, Hancock quickly went looking for Union forces to plug this gap. The first Union unit he found was the 1st Minnesota Regiment commanded by Col. William Colville guarding an artillery battery.

Hancock said "My God! Are these all the men we have here?" He pointed to the enemy flag and said

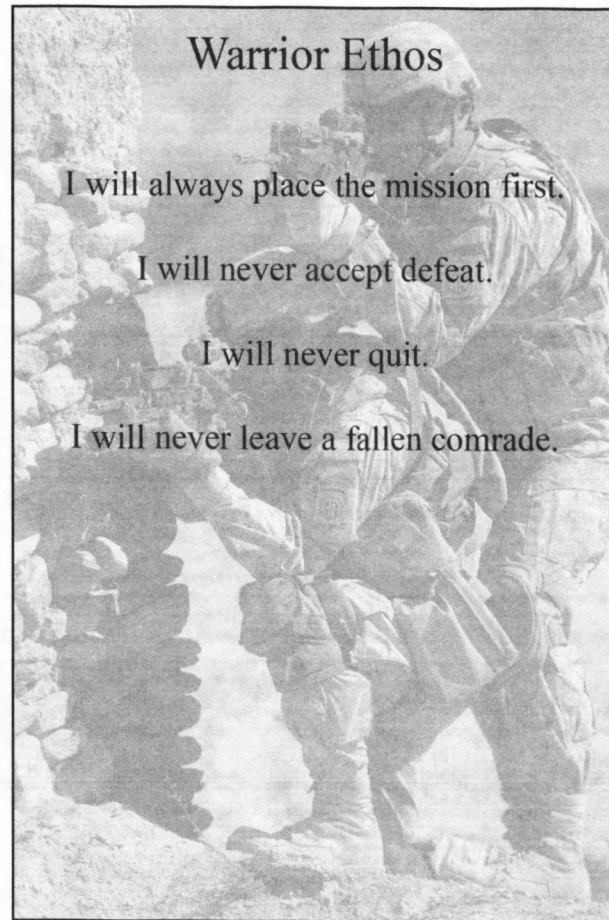
## Warrior Ethos

I will always place the mission first.

I will never accept defeat.

I will never quit.

I will never leave a fallen comrade.



"Colonel, advance and take that flag."

Colville ordered "Forward double-quick."

The 1st Minnesota was a veteran unit, serving in the Army of the Potomac since the first Battle of Bull Run. A Civil War regiment was around 1,000 men at full strength. But fighting numerous battles had reduced the 1st Minnesota to 260 men. On the other hand, a full brigade was around 4,000 men, and even with battle losses, the Alabama Brigade out-numbered the 1st Minnesota many times over.

Colville and his veterans were under no illusions about what they were up against, but without hesitation they fixed bayonets and attacked. Their bold move surprised the Confederates, broke their first line, and stopped their advance.

When the fighting was over, the 1st Minnesota Regiment returned to the Union lines with only 83 men led by Capt. Nathan Messick because no field officers survived. They stopped the Confederate attack and bought time for Hancock to reinforce the Union lines.

**Pivotal moment.** Although Pickett's Charge always gets the fame at Gettysburg, there were other pivotal moments in this most important battle. Had Colville and his 1st Minnesota Regiment not immediately responded to the mission without weighing the cost or the odds, the Confederate forces would have breached the Union lines and rolled up the flank. They would have gained control of the high ground, and the outcome of the Battle of Gettysburg, and possibly the entire Civil War, might have been different.

The battle was in the balance when the 1st Minnesota Regiment answered with the ethos of **"I will always place the mission first."**

When we live the Warrior Ethos, mission first, we will be ready and able to respond to the critical requirements our nation entrusts to each of us. As individuals and as a Corps, our citizens can rely upon us to overcome whatever challenges come our way.

(The opinions expressed in this article are those of the writer and do not reflect the official policy or position of the U.S. Army Corps of Engineers, the Department of the Army, the Department of Defense, or the U.S. government.)





# RCI provides housing for Army families

For decades, Soldiers and family members were concerned about substandard or inadequate family housing and long waiting lines for on-post housing. Those Soldiers lucky enough to find decent quarters off-post had trouble staying within their housing allowances. The Army reported that 70 percent of its family housing units needed replacement or major renovations. Congress recognized that traditional military construction could not remedy the problems.

That was then.

Today, there's a new program sweeping across the Army, one that is changing the face of Army family housing. It is a bold, ambitious multi-billion dollar family housing privatization program called Residential Communities Initiative (RCI), and the U.S. Army Corps of Engineers plays a key role by providing contracting, environmental, and real estate support.

RCI has already had a major impact. Currently, 35 installations (27 projects), with a total more than 75,000 homes, have transferred to different Limited Liability Companies (LLCs).

The RCI program has taken about \$1 billion in government assets and leveraged it to generate more than \$10 billion in construction and renovation development in less time than military construction could have achieved. A total of 420 new and renovated units per month have been delivered during the past 21 months.

RCI projects have awarded \$1.5 billion of development funding to small businesses. The Army was the first to have joint service projects, such as at the Presidio of Monterey, Calif., with the Naval Postgraduate School, and with the U.S. Coast Guard in Hawaii.

The RCI program also exceeds the private sector in conservation. All homes built for RCI are Energy Star compliant, compared to 5-10 percent in the private sector. New homes must also receive a Gold Sustainable Project Rating Tool rating to reduce utility costs.

RCI partners have shown an excellent commitment to sustainability. Designs incorporate environmentally friendly and energy efficient features, as well as extensive recycling and re-use of materials. For example, at Fort Meade, Md., where an old neighborhood was being demolished, mature trees were relocated to a new development, and all the concrete was crushed and reused.

## RCI's birth

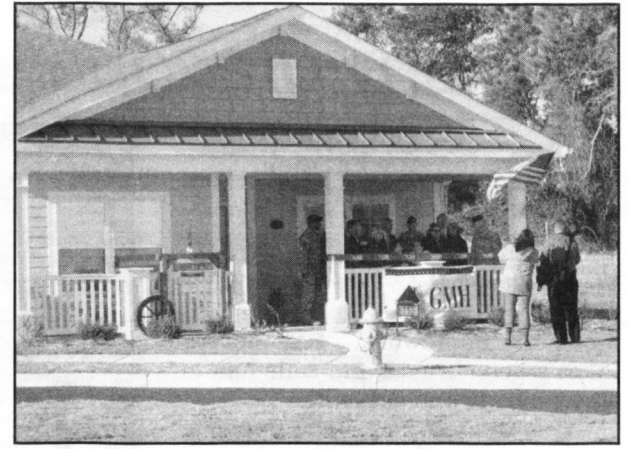
In 1996, Congress passed the Military Housing Privatization Initiative (MHPI). The law authorizes the military services to attract private-sector expertise and capital for improving housing facilities for military members and their families in the U.S. It allows the Army's RCI to select a development partner to prepare plans and obtain private capital to build new housing, repair existing housing, and maintain and operate on-post family housing.

In 2000, President George W. Bush released his Federal Management Agenda. Privatization of military housing was one of his nine agency-specific reforms. In response, the Army created an office of the Deputy Assistant Secretary of the Army for Privatization and Partnerships (DASA (P&P)) to streamline the process of privatizing military housing. This office is the lead for the RCI program, establishes privatization policy, and is responsible for the business documents.

The DASA for Installations & Housing (DASA I&H) is responsible for the real estate documents.

In 2001, RCI moved from a pilot program into its full execution phase. Subsequently, the Corps was charged with executing the program's centralized processes through three RCI centers of expertise — Baltimore District for acquisition, Mobile District for environmental, and Norfolk District for real estate.

Baltimore District is responsible for the acquisition process that selects the developer that drafts the Community Development and Management Plan (CDMP) for the installation. Mobile District oversees and



**Soldiers and their families move into new housing. Left is Fort Eustis, Va., right is Fort Story, Va. (Photos courtesy of Norfolk District)**

produces the environmental work required to lease the land and transfer the improvements to the RCI lessee. As the Army's landlord representative, Norfolk District is responsible for preparing, negotiating, and managing all real estate documents, and providing real estate expertise to the program.

## Streamlined process

Using a Request for Qualifications acquisition process to reduce time and costs for both the Army and the private-sector developers, the Army, through Baltimore District, awards a contract to the selected developer to work with the installation to prepare a CDMP, which defines the proposed scope of work and the developer's long-term relationship with the Army.

The local Army installation public works and real property staff are key participants in determining the lease footprint, assessing the utilities, preparing the Report of Availability, and coordinating the developer's design effort to meet the installation's requirements.

When the plan is approved, the DASA (P&P) and the developer establish a partnership, typically an LLC, in which the developer is the managing member and the Army is the minority member. The Army secretariat then designates the installation garrison commander as its representative for LLC management.

The complexity, size, and value of the RCI projects required new approaches to real estate negotiation. Under direction of DASA (P&P) and the authority of DASA I&H, the Norfolk District RCI team negotiates a 50-year ground lease with the LLC as the lessee.

The ground lease is of great interest to the financial companies who lend the project hundreds of millions of dollars for construction. The Army transfers full ownership of the housing improvements and associated personal property to the lessee. The team then represents the Army as landlord for the ground lease.

RCI is a cutting-edge program, and it was necessary to blaze trails beyond the typical real estate negotiation realm. The Norfolk District team developed and published several RCI-related handbooks and Standing Operating Procedures (SOPs).

Corps real estate instructors are using the RCI Jurisdiction Primer in their course curriculum, NASA and the Army General Counsel are using an RCI Freedom of Information Act procedural SOP, and installations are using the RCI Real Estate Handbook to better integrate real estate into their business practices.

## Unique challenges

Working with top law firms around the country that represent developers and lenders, the Norfolk team negotiates project-specific documents. More than 100 business documents must be created within a six-month period. The consequences of missing the closing date for transfer of real property are severe, resulting in a minimum 30-day project delay and an additional bill to the Army of between \$500,000 and \$8 million. Although faced with significant hurdles,

the team has never missed a closing deadline, and has transferred an average of more than 1,000 family housing units a month for the last five years.

But not all of the RCI projects have gone smoothly. For example, the team used an innovative approach to solve a potential dilemma at Fort Belvoir, Va., when the lessee was unable to obtain financing on time. If the real estate closing did not occur, the Army would have had no contract in place to manage the homes, and it would have cost \$6 million dollars to run the homes for just one month.

The team quickly researched various leasing authorities and determined that the Army could perform an interim lease. This interim leasing approach has been subsequently used for several Army RCI projects, and the cost avoidance to the Army has been well over \$70 million.

Last-minute challenges often arise before to closing. At Fort Benning, Ga., a noise study update for a nearby firing range showed that 94 existing homes were located in a high-noise zone. The team quickly changed the real estate documents to withdraw the affected land from the ground lease.

At Fort Sam Houston, Texas, the garrison requested continued use of a portion of the old officer's club as office space after it was to be transferred to the lessee. The RCI team, to better finance the project, requested rent for the Army to remain in the building. The Army secretariat rejected the RCI project request as against Army policy. The team examined the issue and determined that the building could be leased rather than transferred, and that the installation would pay only reimbursement for utilities. The garrison was satisfied because it was able to continue using the space, and the lessee was grateful that the arrangement would not increase its operating costs.

Army Transformation, which re-stations troops and organizational equipment, creates challenges for RCI projects. The team, which is now working on Phase II of several projects affected by the 2005 Base Realignment and Closure, works continuously with the RCI lessees, the installations, Assistant Chief of Staff for Installation Management, and the Army secretariat to meet these changing requirements.

## It takes a village

The Norfolk District team is proud to be part of a larger team led by the DASA P&P. The greater team is a wide range of personnel who contribute to the RCI mission — from the installation garrison commander, public works and real property staffs, military community stakeholders, up to the Army secretariat.

RCI has been lauded as an innovative and creative way to build sustainable homes, improve quality of life, and provide residential communities for Soldiers and their families. That accomplishment has been the most important outcome of the many successes this dedicated team has achieved.

*(This article was written by the Norfolk District RCI Real Estate team.)*



# Second-time parents

## Many grandparents are adopting their own grandkids

Article and Photo  
By Monique Farmer  
Omaha District

In many ways, Nicholas (Nick) Vogt is a typical 12-year-old boy. He drags his feet and grumbles about doing his homework. His mother takes a deep breath and tells him to stop whining and get to it.

Using his left hand (the only one he can use), Nick plops his Perkins Brailler, a manual Braille machine for blind readers, on the kitchen counter. He slaps a sheet of paper into its paper roller and cranks the bulky contraption.

"Spell the first word," his mother says. It is obvious Nick would rather watch a football game, bowl, camp, or listen to music — a few of his favorite activities.

But unlike most boys his age, Nick must work hard to conquer simple daily tasks like homework and dressing for school. His whole life has been constant trials.

It has been a trial for his parents, too, except that Linda Vogt and her husband Mel, a contract specialist in Omaha District, are *not* Nick's biological parents. They are his *grandparents*, one of a growing number of grandparents who now care for their children's children.

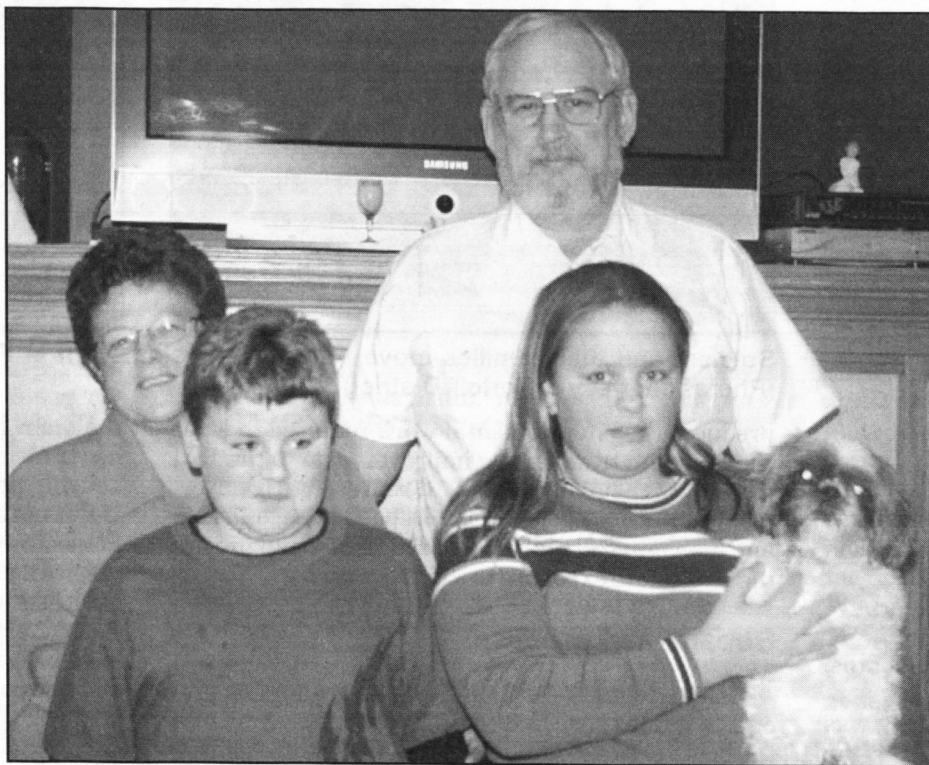
### Second-time parents

They're called *second-time parents* or *caregiver grandparents*. It is also called *re-parenting*. An estimated five percent of all school children, about 1.35 million, are cared for full-time by their grandparents. The reasons for the increase in second-time parenting include parents lost to drug addiction, AIDS, incarceration, mental illness, or crime. The increase in divorce, teen pregnancy, and the rapid rise in single parent households are also cited as factors.

The duration of re-parenting varies by race, class, region, and other factors, but about three-quarters of children who come into the care of a grandparent do so when they are infants or preschoolers, with more than 40 percent remaining for five years or more.

In many ways, the Vogts are typical second-time parents. Although news media accounts often focus on single, low-income black women raising their grandchildren, recent studies suggest that the typical grandparent raising a grandchild is a married white woman.

The Vogts are in their mid-50s, empty-nesters whose children are grown. But instead of pursuing leisure activities and looking toward retirement, they are parents again — waking the kids in the morning, sending them off to school, attending PTA meetings, and paying doctor bills.



Linda and Mel Vogt with their adopted grandchildren, Nicholas and Nichole. (Photo courtesy of Linda Vogt)

For the Vogts, it began about 12 years ago with a cry for help.

### Something was wrong...

Linda didn't know what to expect that day as she drove through Harlan, Iowa. Minutes before, she had received an urgent call from her oldest daughter, Cindy, that something was wrong with Nicholas, the six-month-old son of Tricia, her youngest daughter.

Linda arrived at Tricia's apartment within minutes, her heart pounding as she rushed inside. Nick was seizing uncontrollably. Tricia had gone shopping, and left Nick in the care of her boyfriend, who was not Nick's biological father.

Linda and Cindy took Nick to Myrtue Memorial Hospital in Harlan. There, the doctors called for a life flight to Children's Hospital in Omaha. Linda flew with Nick, and what took place in the next hours was something she could never have imagined.

### Shaken baby

Doctors at Children's Hospital examined Nick immediately.

"They acted very suspicious when they informed me of his status in the emergency room," Linda said. Mel and Tricia were still on their way by car to Children's Hospital and, while the doctors awaited Tricia's arrival, they questioned Linda.

"They just flooded me with questions," she said. "It didn't take them long to conclude he was a shaken baby."

Mel and Tricia arrived by the time Nick's magnetic resonance imaging brain scan came back. Doctors esti-

mated that Nick had been severely shaken several times from the time he was about one month old.

"Mel and I looked at each other like, 'What's shaken baby syndrome,'" Linda said. "We had no idea. Now you hear about it all the time. But, you don't imagine..."

"...anyone you know is going to harm children," Mel completed her thought.

By the time doctors controlled Nick's seizures, he had suffered a stroke that incapacitated his right side. Doctors told the Vogts that damage to Nick's brain stem was so extensive, he might live his life in a vegetative state.

Nick remained in the intensive care unit at Children's Hospital for about a week before authorities released him to the Iowa Department of Health and Human Services (DHS) in Harlan. Nick and his twin sister, Nichole (who did not suffer from shaken baby syndrome), were removed from their mother's home and placed in foster care.

As Nick grew older, doctors learned that the damage also affected his vision.

"He can see," said Linda. "We're just not sure what he sees. He goes for eye checks and the ophthalmologist measures his vision at about 20/1500. A person with 20/200 vision is legally blind."

"We can put a ball on the ground," Mel added. "One time, Nick will pick it up. The next time, he'll trip over it."

### Foster care

Tricia's boyfriend confessed to shaking Nick and was sentenced to 10

years in prison under a Class C felony in the State of Iowa.

DHS kept Nick and Nichole in foster care. Since Nick required medical attention, he was placed with medically-trained foster parents. As Nick grew older, doctors inserted a shunt in his brain to draw off excess fluid, put him on a sleep apnea monitor to watch his breathing and heart rate, and prescribed several medications to control seizures.

Meanwhile, Tricia worked through a list of DHS stipulations to win back her children. Every time DHS allowed Tricia to visit Nick, Linda tagged along. Visits typically took place once a week, usually in the DHS offices in Logan, Iowa.

"Originally, our goal was to be grandparents and make this work for their mother," said Linda. After a few months of interviews, background checks, home studies, and psychological examinations, the Vogts obtained custody of Nichole.

They were accustomed to an empty nest, but they quickly built up the stamina to care for eight-month-old Nichole. Late night feedings and coordinating childcare so the couple could work took getting used to.

"At first, it was 'Oh, my goodness,'" said Linda. "But you do what you have to do, like she's your own child."

Eventually, DHS returned the children to Tricia. But the ordeal had just begun.

### The last straw

For the next four years, the children were in and out of their mother's home.

"Something would always happen," said Mel. "A mark would show up on the children and the teachers would report it to DHS. Once something as traumatic as what happened to these children takes place, everyone is under the microscope."

One weekend in 2000, while the Vogts were on vacation, Tricia called to say a friend had reported her to DHS, and the agency took the children again.

Linda was devastated. "I flew home, but there was nothing we could do."

Mel followed shortly, driving back to Iowa. It took them 10 days of working with DHS and the courts to get the children back in the Vogt's home.

"We had supported Tricia to that point, but we decided to wash our hands of supporting her," said Linda.

The Vogts consulted with a lawyer about adopting the children, but they quickly learned "grandparents have no rights," said Mel. "In a parental chain, grandparents are the lowest on the chain."

During court proceedings, Tricia

Continued on next page



# 'Jet-setter' adventures in Kosovo

By Sarah Cox  
Honolulu District

When most people think of the "jet-set," they think of wealth and celebrity. But some of the greatest jet-setters in the world work for the U.S. Army Corps of Engineers.

Ray Kong, a geological engineer with Honolulu District, is one of those USACE jet-setters.

Several years ago as part of the Joint POW/MIA Accounting Command, Kong deployed to Vietnam to assist in bringing home the remains of American Vietnam War Soldiers.

In 2005 Kong deployed to Banda Aceh, Indonesia to assess infrastructure damage after the devastating tsunami killed about 220,000 people.

Last February Kong deployed to Leyte, Philippines as part of a Forward Engineering Support Team after a massive landslide swept away Guinsaugon village.

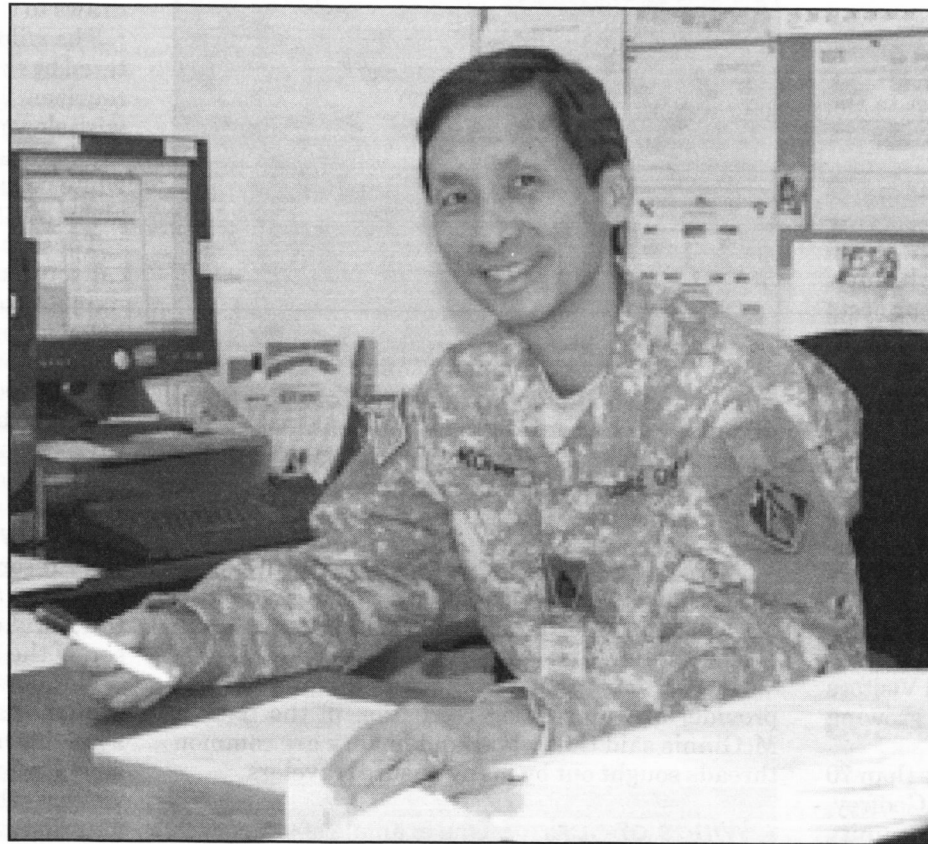
One month later Kong joined an emergency Preliminary Damage Assessment team in providing immediate geological reconnaissance after the earthen Kaloko Dam breached on the Hawaiian island of Kauai.

And now, Kong is at Camp Bondsteel, Kosovo...the former Yugoslavia.

"I hope to make an impact by my example, words and program implementation, however small the impact may be," said Kong, a 30-year veteran with the U.S. Army Corps of Engineers. "I've had opportunities upon opportunities to hit even higher goals. Who says you can't experience new things when, like myself, you are in the later years of your career?"

Kong says one of his goals has been to become the best engineer he can be.

"This [trip to Kosovo] will really help my engineering judgment," Kong said. He strongly believes that improved engineering judgment can be gained by getting into different situations that



Ray Kong at his desk at Camp Bondsteel in Kosovo, where he served as Deputy Director for the Directorate of Public Works. (Photo courtesy of Honolulu District)

require thinking outside of the box.

Kong has never served in the military, but has deployed all around the world after typhoons, hurricanes, and earthquakes. He said having this on-the-ground experience with Soldiers has been a real eye-opener, and gave him a first-hand understanding of the operations side of engineering and a keener insight into the "whole picture."

It has also put Kong's life in perspective and given him a greater appreciation for America and its blessings.

"The Soldiers are here to provide freedom for the Kosovars," Kong said. "How fortunate we are in the U.S. with our affluence and freedom. I essentially

wanted to experience everything, and at the same time hope I can give back as much as I gain."

Kong says aside from the cold weather and the rapid pace of work, his job in Kosovo is not too much different from his Honolulu District job.

"Surprisingly, it isn't much different from my regular job, only answers are required more quickly," Kong said. "Sometimes my work requires long hours to complete because everything here is required to be done quickly."

Kong left Honolulu in January for the four-month deployment to serve as Deputy Director for the Directorate of Public Works (DPW) for the Area Sup-

port Team. After two months he was promoted to Director for DPW. He helps oversee the work of contractor Kellogg, Brown, and Root Services, Inc. (KBRS). KBRS provides most of the infrastructure and utility services on Camp Bondsteel, Camp Monteith, and other remote sites in Kosovo.

"I enjoy helping to run the base more efficiently so that our Soldiers and others can concentrate on doing their jobs better," Kong said.

Overseeing the buildings, electricity, water, heating, air conditioning, and roads for Camp Bondsteel and its 7,000 U.S. Soldiers is no easy task, but gives Kong a great sense of accomplishment.

Kong's supervisor, Erick Kozuma, Chief of Technical Support Branch in Honolulu District, said that Kong continues to help the Schofield Barracks Resident Office resolve current issues with paving requirements for the Drum Road Phase I project in Oahu.

"Even though he has been working long days and weekends (in Kosovo), when we do have issues, he has been providing guidance via e-mail," Kozuma said. "Since I've worked with him, he rarely says no to any request."

Camp Bondsteel was established in 1999 following NATO Operation Allied Force when Serbian troops were forced out of Kosovo and replaced by international peacekeepers to ensure that refugees could return to their homes. The camp grew from a farming area to a 900-acre camp to support the NATO-led peacekeeping mission.

The military and KBRS have worked quickly to improve servicemembers' quality of life by building wooden South East Asia huts to replace the tents, plus several dining facilities, two chapels, a 24-hour fitness center, a library, plus pizza and hamburger restaurants.

Kong will return to Honolulu this month to his wife and three children to resume his work as a geotechnical engineer in Technical Support Branch.

## Second-time parents

Continued from previous page

contacted their biological father. Though he had not played much of an active role in the children's lives, he considered taking custody.

"Now you have grandparents fighting a biological parent for custody," said Linda. "We had to make another tough decision — whether to fight that battle and risk never seeing the children again, or allow him to take full custody."

The Vogts decided against fighting the father for custody. The courts awarded him the children, but allowed the Vogts weekend visitation. The children moved to Nebraska to live with their father, but *deja vu* set in on May 23, 2002.

"Their father abused them," said Mel. "The story we got was that he kicked Nichole and she fell against the coffee table. Then he threatened them with a small souvenir baseball bat."

So the children went into foster care again, and the courts awarded the Vogts temporary custody on July 23, 2003.

### Home sweet home

A year after the Vogts gained temporary custody, the kids hadn't seemed so at ease in years. "You could see the change in their expressions when you compared photographs from one year to the next," Linda said. "It was amazing."

In April 2004, the children's father called to tell the Vogts he would relinquish parental rights and allow them to adopt Nick and Nichole.

Mel and Linda were prepared for that battle. "We agreed early on, if we're in for a penny, we're in for a pound," said Mel.

In 2004, after a 10-year saga, the Vogts adopted their grandchildren.

"It was such a relief to get all those other people out of our lives," Linda said.

The Vogts added 840 square feet to their 1,000 square foot home to provide adequate living space for the now family of four. They also had to get used to again helping with homework and running children back-and-forth to school activities.

The experience came with plenty of life lessons, but Mel and Linda agree it has been worth it to provide a safe, stable environment for their grandchildren.

"If we had it to do again, we wouldn't have supported their mother for so long," said Linda. "It caused the children to suffer longer than necessary."

Through it all, Nick has avoided living in a vegetative state, gained strength in his legs, and made adjustments in his daily routine to overcome his handicaps.

"He has learned to perform his favorite activities in his own unique way," said Linda. "He doesn't know anything different. He's a little behind with his cognitive skills, but he's a sponge and he's learning every day."

Though his sister Nichole suffered no physical handicaps, the Vogts are mindful that she may require counseling during her teen years.

"She has some fears like being afraid of the dark and being alone for lengthy periods of time," Mel says. "But, she's adjusting to a normal, stable life. Like most teenagers, she likes watching TV and having friends come by for overnight stays."

(The information in the "Second time parents" section is from "Caregiver Grandparents: Parenting, The Second Time", an abstract of recent studies and articles from the *Assemblies of God Theological Seminary*.)



# Corps projects bring in tourist \$\$\$

Article and Photo  
By Alan Dooley  
St. Louis District

There is a subtle but powerful side-effect to the U.S. Army Corps of Engineers' water resources projects that is not often examined.

How the projects benefit flood control and water resource management is well known. Preserving and enhancing ecosystems is of great benefit to the nation's water supplies, wildlife, and scenic beauty. The recreation opportunities that our water projects offer (swimming, boating, hunting, camping, fishing, and much more) are widely acknowledged.

But how all of this affects *tourism* is not widely discussed.

**Nature-based tourism.** It is called *nature-based tourism* — people will travel a long way to experience the outdoors first-hand, bringing their money to the local economy, and needing services that local people are hired to provide.

St. Louis District is typical of how Corps water projects can benefit tourism. The district was recognized by the Alton Regional Convention and Visitors Bureau for its work supporting the region's growing nature-based tourism.

District representatives were among more than 70 businesses and 29 sponsors who gathered in Godfrey, Ill., for a dinner at Lewis and Clark Community College. Brett Stawar, the bureau director, presented the award, which was accepted by Deputy District Commander Lt. Col. Greg Raimondo, Riverlands Area Manager Pat McGinnis, and Rivers Project Manager Andy Schimpf.

Stawar praised the Corps' partnership efforts throughout the region. A major effort is focused on enhancing public open space that is safely accessible. This effort is especially valuable near large metropolitan areas where citizens otherwise see open land and wildlife infrequently.

**Important Bird Area.** The Riverlands Migratory Bird Sanctuary is only about a dozen miles from much of St. Louis. It has been designated by the National Audubon Society as an Important Bird Area.

The IBA designation is important to travelers seeking unique birding experiences, since it calls attention to the area as a premier area to view birds that migrate along the Mississippi River flyway. In recent years, new state records and a number of rare birds seldom seen in the U.S. have been recorded there. In addition, several endangered plants thrive in the sanctuary.



Bob Dickerson holds up his son, Cole, to offer a donation to Lenore, a white-necked raven in the National Great Rivers Museum at Melvin Price Locks & Dam. Lenore drops money into the box at her feet.

"More and more people are seeking natural experiences that celebrate our nation's culture and natural heritage," McGinnis said. "The river is a big part of that in this region."

He also noted that the Corps is the number one provider of water-based recreation in the nation. McGinnis said that water and history are common threads sought out by many leisure travelers.

**Wings of Spring.** One example of support to nature-based tourism was last year's First Annual Wings of Spring Confluence Birding Festival. The festival is a multi-agency, multi-organization collaborative at the Riverlands Migratory Bird Sanctuary and sponsored by the Missouri Audubon Society.

The event promoted nature-based opportunities that visitors can enjoy while visiting the area. Even though the two-day event was hampered by wind and cold rain, more than 1,600 people came for exhibits, presentations, demonstrations and the opportunity to view first-hand the birds that are seen each spring.

This year the festival will be May 4-6, and has been greatly expanded.

McGinnis said that the Rivers Project and other district projects partner with numerous state and regional groups to make the region a popular destination for travelers.

He calls the natural heritage priceless, but said, "If you want to put a dollar value on tourism, the travel industry in St. Clair and Madison counties alone employs more than 7,000 people and generates a payroll of \$165 million annually. That number is growing at 4-5 percent each year. Certainly the unique opportunities to see, hear, and touch so many

unique elements of our environment are powerful draws to the region."

The wildlife at public lands and waters administered by the Corps are assets that foster sustainable tourism. For example, this winter, during an otherwise slow period for tourism in the St. Louis region, the Riverlands sanctuary hosted large numbers of white pelicans, more than 200 trumpeter swans, and about 80-100 bald eagles.

These birds are considered the "Big Three" by local tourism promoters, and regularly draw large numbers of families and bus tours for heavily marketed viewing opportunities.

Other St. Louis District projects attract to take part in recreation activities including swimming, camping, boating, hunting, or simply slowing down to enjoy nature.

All this and more is nature-based tourism.

**Big numbers.** More than 15.9 million visits were recorded in St. Louis District last year, more than *four times* as many people as who paid to see the world champion Cardinals play their first season in the new Busch Stadium.

Nationwide, the Corps notched more than 368 million visits last year, with many opportunities available near population centers east of the Mississippi River. These natural wonders are accessible to visitors who do not want or cannot afford to travel long distances to sample nature at its best.

While tourism is not all about visiting nature, a growing segment of it is. In Illinois, last year tourists spent more than \$44 billion and employed 581,000 people meeting their needs. Nationwide, those numbers are more than \$653 billion and 7.5 million people employed by tourism.

The result of the hard work by Corps districts in the recreation arena is a win-win-win for America. The projects help restore clean air and water nationwide. They enhance the ecosystem of our nation, making life better for the flora and fauna. And finally they make large parts of this system accessible to the public so that they can both enjoy and appreciate nature, and see their tax dollars at work for everybody's benefit.

Overall the Corps shows visitors a balanced watershed approach to water resource development.

In a capsule, seeing a bald eagle fly close overhead and dive to snatch a fish out of the river for dinner is a priceless opportunity that is available to the 2.5 million people who live in St. Louis District, and everyone who visits here. And that's just a small part of the Corps' contribution to nature-based tourism in the district, and nationwide.

HR Corner

## Employees get SMART with iSuccess

*iSuccess* is here!

In response to NSPS Spiral 1.1 employee feedback and suggestions, the *iSuccess* automated tool has been developed by the Program Executive Office to assist employees in writing effective job objectives that meet the requirements of the Strategic, Measurable, Aligned, Relevant, and Timed (SMART) framework and in developing and writing self assessments.

Draft job objectives and accomplishments can serve as a starting point for discussions between employees and their supervisors as they work to finalize mission-aligned objectives.

It is strongly recommended that before using the new *iSuccess* automation tool, each employee complete the computer-based training entitled "NSPS 101". This course is the first piece of the NSPS con-

version puzzle that needs to be understood by each employee before taking any other training for NSPS.

The narrated *iSuccess* course guides the employee through the writing process using a step-by-step approach. The "virtual coach" and "virtual employees" are added features that provide important tips and techniques and specific writing examples. *iSuccess* also helps identify the contributing factors used to accomplish job objectives and helps employees understand the impact performance indicators have on the development of job objectives.

Why are job objectives so important? Here are some of the benefits associated with developing good job objectives:

- Increases awareness of how your work supports the overall departmental and organizational strategic initiatives and goals.

- Provides a useful guide to assess your progress in meeting your job objectives.

- Serves as part of the basis for determining your compensation at the end of the rating cycle.

- Promotes communication and shared understanding between you and your supervisor about what is important in your organization and what is expected of you.

*iSuccess* is self-paced and is useful at any time during the performance management process. Employees can place drafted work into a Word document and save it to the computer desktop for easy access at any time. The employee can also copy and paste their job objectives into the NSPS Performance Appraisal Application.

To access *iSuccess*, please go to the following Web address: <http://www.cpms.osd.mil/nsps/iSuccess/>



# Around the Corps

## Lifesaving award

Four Cameron parish debris team members received the Department of Army Civilian Award for Humanitarian Service last week at the Louisiana Recovery Field Office (LA-RFO) in New Orleans. They were recognized for saving the life of a truck driver delivering debris to the Wilkerson landfill in Cameron Parish last May 6. The award recipients were Justin Bult, Debra Christie, Robert McKechnie, and Yvett Young.

According to on-scene medical personnel, had the team not taken action to treat the driver for heat stroke, he would have perished.

The driver had stopped at the site's control tower after changing a flat tire in the dump when the tower monitor team noticed he was exhibiting signs of heat stroke. The quality assurance team soaked paper towels with ice and ice water from one of their coolers to help cool the driver. They provided available fluids and asked about medications and medical conditions.

After being treated by on-scene and hospital medical teams, the driver was released to go back to work two days later. He made a complete recovery.

## Long Meadow

The bird motel in Bloomington, Minn., is open. So are the food court and the pool. St. Paul District, working with the U.S. Fish & Wildlife Service and the Minnesota Department of Natural Resources, has improved habitat for migrating waterfowl not far from the Mall of America and the hotels and restaurants that surround it.

Last November, a contractor for the district completed a new water control structure at the Minnesota Valley National Wildlife Refuge. The new control structure improves Long Meadow Lake as a rest area and food source for migrating waterfowl.

"It prevents the Minnesota River from backing into Long Meadow Lake during floods," said Don Powell, project manager. "It also provides the capability to discharge excessive water from the lake. Restoration of farm fields to native floodplain forest habitat is planned for later this year."

Long Meadow Lake was dying as sediment from the Minnesota River filled in the marsh. Damage included loss of emergent aquatic vegetation, decline in habitat diversity and marsh quality, and faster aging rate of the lake.

The improvements, costing \$302,000, were funded under the Environmental Management Program. The contractor will finish planting trees this spring.

## Air Combat Command award

Air Combat Command (ACC) named Omaha District its 2007 Design Agent of the Year during its annual Design/Construction Awards Luncheon in Newport News, Va.

The award recognizes professional management of the design and/or construction of Air Force military construction (MILCON) projects. The Air Force pays specific attention to whether design milestones were met, projects completed on time and within budget, little or no effort lost during design, unique management ability, and innovative design techniques.

"Omaha District scored exceptionally well," said Michael Ethier, Chief of Project Management, West, ACC. "They provided leadership and knowledge of the Air Force criteria and standards to deliver outstanding design documents and expertly lead the design of critical mission facilities. There's a lot of stiff competition out there, and for this they can be proud."

The district's design team prepared nine ready-to-advertise FY06 MILCON projects, managed the design of two Congressional insert MILCON projects, and completed several other designs below cost and ahead of schedule.

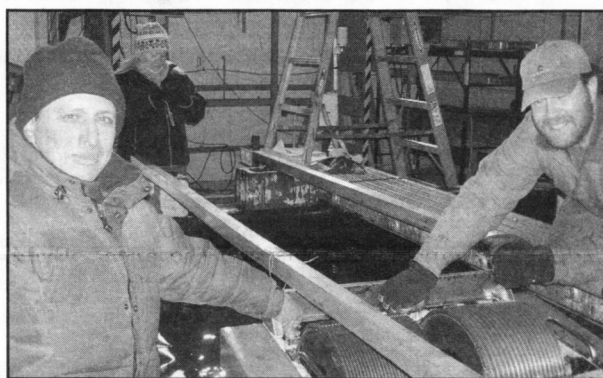
In addition to being the ACC's 2007 Design Agent of the Year, Omaha District also received the ACC Honor Award for add/alter work completed at the Minot Air Force Base Fitness Center.

## Connolly Award

Gordon Simmons, chief of Design Branch in Savannah District, received the Society of American Military Engineers' (SAME) Connolly Award during the Savannah Region National Engineers Week's Technical Training Conference.

Named in honor of James Connolly (1868-1957), Olympic gold medalist, Spanish-American War Veteran, distinguished author, and Savannah District employee, the Connolly Award is presented annually for contributions to engineering by a civilian or uniformed engineer that bring recognition to Savannah.

While managing a \$600 million new construction and renovation program, Simmons aided in creating and implementing the Centers of Standardization (COS). By reorganizing the district's Design Branch and creating and chairing a COS Management Board to implement and provide process consistency, Simmons made a notable contribution to this major paradigm shift in the Corps.



Dr. Arturo Keller (left) and Bill Burch adjust the drum on an oil skimmer.

## Visitor's Day

The Cold Regions Research & Engineering Laboratory (CRREL) co-hosted an oil spill response Visitor's Day on March 6. Hosting partners included the U.S. Department of Interior's Minerals Management Service, the Oil & Hazardous Materials Simulated Environment Test Tank, and the test principal investigator Dr. Arturo Keller from the University of California Santa Barbara.

Participants watched the performance of modifications to mechanical oil skimmers in a cold environment at CRREL's Material Evaluation Facility.

"These tests will give oil spill responders confidence that mechanical skimmers will work in cold environments," said Leonard Zabilansky, a CRREL research civil engineer.

According to the EPA, about 14,000 oil spills are reported each year in the U.S. The increase of oil exploration and transport in the Arctic increases the risk of an oil spill in cold, ice-covered waters.

The mechanical oil spill recovery equipment used in warmer waters was not designed to collect more viscous oils, or oil-ice mixtures. Novel drum skimmer surface geometry and materials tailored to cold climates are expected to increase the rate of oil recovery. The testing goal is to provide initial quantitative data on the effect of oil adhesion on different oil skimmer drums under varying conditions.

The skimmers were tested using a full-scale spill recovery unit with three different oils and seven drums modified with varying surface geometries.

"Testing different drum geometries and surface treatments to recover crude oil went well," Keller said. "Preliminary results show that some modifications

are better than others at collecting crude. At one point we were recovering 40 gallons per minute of crude, compared with a conventional drum of only five gallons! Of the seven drums tested, the larger polyethylene-covered drum with a 30-degree angle worked well for picking up Alaskan Endicott crude."

## SAME/Army Engineering & Construction Camp

The Society of American Military Engineers (SAME) is accepting nominations for qualified high school students interested in attending the SAME/Army Engineering & Construction Camp June 10-16 in Vicksburg, Miss.

Forty students from across the nation will be selected to attend the camp. They will enjoy hands-on engineering and construction activities under the mentorship and supervision SAME professionals and others from the local engineering community.

For more information, contact Henry Dulaney at (601) 631-7724, Jimmy Waddle at (601) 634-5922, or visit the Web site at [www.samevicksburg.org/camp/index.htm](http://www.samevicksburg.org/camp/index.htm)

## Coastal Challenge

Along with events from luncheons and banquets to activities promoting camaraderie like the golf tournament and Habijax event, Jacksonville District played a big part in promoting the most important part of Engineers Week — telling students about educational and career opportunities in engineering.

One event was the fifth annual Engineering Career Day at the district headquarters. Almost 100 area high school students were introduced to engineering as a career through technical problem-solving competitions, and interacting with engineering professionals from 16 public and private organizations and admissions staff from four Florida universities.

Although it was a day full of competition and discovery, the learning and fun began weeks before. The 17 student teams were given a project to design a coastal bridge that could survive waves from a simulated hurricane. This assignment familiarized them with basic engineering, and challenged them to work in teams to solve real problems within real constraints. Their structures were judged on design, survivability, construction, and cost.

After lunch, the students' imaginations were further tested with a surprise problem that had them designing and building an artificial wave-break reef. Their design was tested in wave tanks built by some of the district's Engineering Career Day Team.

Eagle's View Academy won the competition. This was their first win and their first time participating.

## Value Engineering awards

The Corps has won two awards in the 2006 DoD Value Engineering Achievement awards. Value engineering (VE) is a process of function analysis to identify actions that reduce cost, increase quality, and improve mission capabilities. There were 33 winners, and a ceremony will be held May 16 at the Pentagon.

Our winners were the Military Construction Transformation Development Team, and Louisville District.

The team won the Outstanding Value Engineering Team award. They used or participated in 13 Value Engineering Workshops to help the Corps transform its Military Construction Delivery Process. The VE work culminated in award of a pilot project at 100 percent scope, within budget, during a difficult construction bid climate due to Hurricane Katrina.

Louisville District won a Special Award for support and use of the VE program. The district doubled its military programs and civil works cost savings to \$15.5 million in FY06. Of that, \$6 million came from a Civil Works Value Engineering Change Proposal.



# Iraqi wheat agriculture on the rebound

By Polli Barnes Keller  
Gulf Region North

Many articles are written about rebuilding Iraq's infrastructure, and most of the ink goes to petroleum, water, electricity, and police and military projects.

But other facets of Iraqi life are improving, too. Farming, for example. After decades of strain, the Ministry of Agriculture in the Ninewa Province reported a significant increase in the wheat crop yield for 2006.

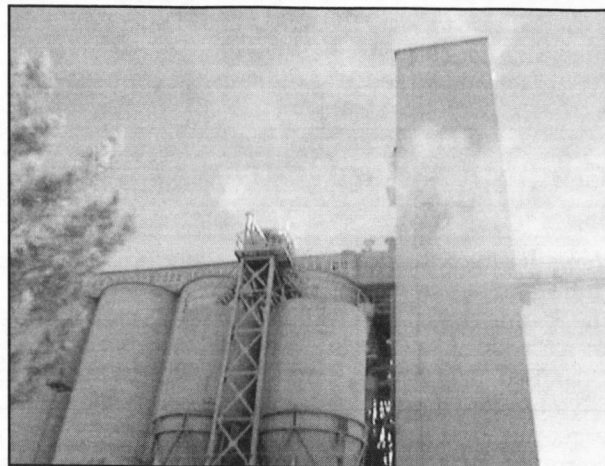
Today, the U.S. Army Corps of Engineers is working with the Government of Iraq to restore the grain marketing infrastructure by renovating two granaries in Ninewa Province. With the increase in wheat production, having a place to store the crop is vital.

Once considered the second-largest value sector in the country, agriculture in northern Iraq took a dramatic downfall during the years of Saddam Hussein, caused by Iraq's involvement in military conflicts and by the government's efforts to promote and control agriculture production.

The renovation of these two facilities at a combined cost of about \$2 million will provide a reliable source for the processing, storage, and distribution of various grain crops, which is needed to restore agriculture productivity.

"The Sinjar and Tal Afar granary renovation projects are beneficial to those farmers in the Ninewa Province and Iraq's agricultural industry," said Maj. Vincent Navarre, resident engineer for the Mosul resident office. "These granaries are rewarding projects. We'll have an opportunity to observe the facilities in operation during the next harvest season in Ninewa."

Wheat is a fundamental staple crop in the Middle East. According to U.S. Agency for International Development (USAID) reports, Iraqis consume nearly 4 million tons of wheat annually, yet produce only



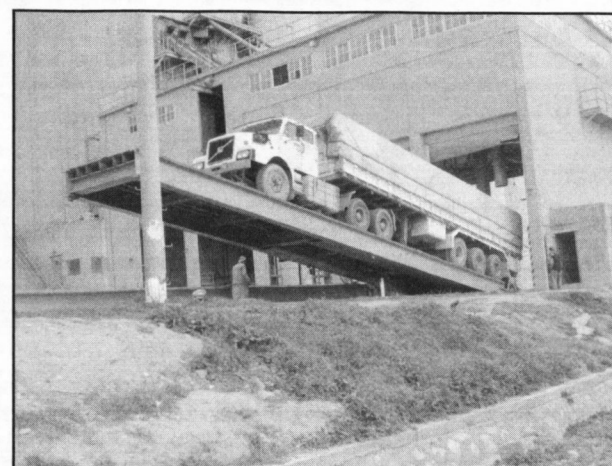
Wheat production is increasing in Iraq, and two renovated granaries will help store the crop. (Photos courtesy of Gulf Region North)

500,000 tons of milling-quality wheat. More than 85 percent of the wheat consumed is imported, adding to the country's economic burden.

These two state-owned grain silos feed into the Public Distribution System's flour requirements. The more grain the government can store, the less they have to import, thus easing the economic burden.

U.S. Navy Lt. Shane Stoughton, the Agricultural Team leader for the Ninewa Provincial Reconstruction Team said, "Increasing the capacity of the granaries as a post-production grain marketing outlet benefits the citizens of northern Iraq and improves the macroeconomic situation of the country as a whole. These projects also raise the demand for grain, which in turn drives the production agriculture sector to achieve greater efficiency and output."

The granaries in the Ninewa Province will help revive the agricultural sector. With agencies such as



the Corps, USAID, and other non-government organizations working to increase domestic production, the increase will provide income and employment opportunities to the Iraqi people, as well as create stability through private sector development, reduce poverty, and create food security.

## Pumps

Continued from page one

It was reported that the new pumps vibrated when first tested at the outfall canals.

"Some of them did, but we did *not* see failure when the pumps vibrated," Bedey said. "They would not have operated perfectly, but they would have provided pumping if we had needed it in 2006."

Bedey compared the pump situation to an automobile. "When you know your car engine has a problem, you would prefer to repair it rather than drive it. But if you're in an emergency situation, you'll go ahead and drive it and get where you need to be, and *then* fix it when you can. That's basically what we did with the pumps."

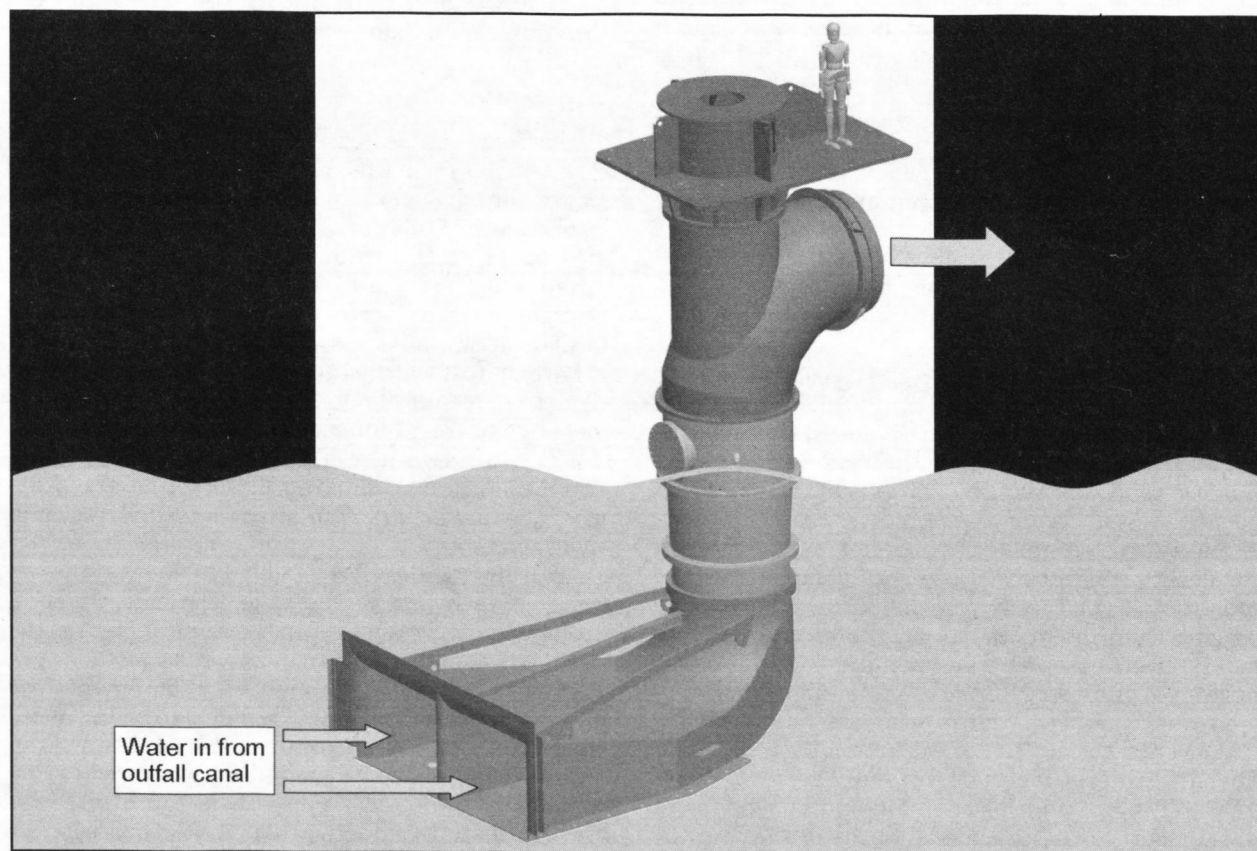
**Solutions.** Today, the pump problems are being solved. The pumps are being shipped weekly, and are being installed and successfully tested at the outfall canals.

"The 11 pumps that were retrofitted with stiffer springs in the hydraulic motors are performing well," said St. Germain, who directed the current field tests.

"Installation of the new pumps is going smoothly, and all 40 hydraulic pumps will be in place for this year's hurricane season," Bedey said.

The Lake Pontchartrain and Vicinity Hurricane Protection Project has a long and involved history of decision-making and interaction by all levels of government, local sponsors, and the courts from the time it was first authorized in 1965 through today.

This spring, the Corps expects to release the Hurricane Protection Decision Chronology for public comment. An independent team, commissioned by the Corps, is examining all known documentation related to the development of the New Orleans-area hurricane protection system. The chronology will provide a greater understanding about how the system came



This is an illustration of the operation of a pump, and its size in relation to a human. (Illustration courtesy of Fairbanks Morse)

to be that was in place when Hurricane Katrina made landfall on Aug. 29, 2005.

The chronology complements the work by the Independent Performance Evaluation Task Force (IPET) in the aftermath of Hurricane Katrina. The

IPET study is a record of what happened during the storm and why. The chronology documents the record of decisions related to the system, including the outfall canals and the varied proposals over time as to how to best protect the canals.